Abstract

Biogeography is the study of distribution of biological species, over space and time, among random habitats. Recently developed Biogeography-Based Optimization (BBO) is a technique, where solutions of the problem under consideration are named as habitats; similar to chromosome in Genetic Algorithms (GAs) and particles in Particle Swarm Optimization (PSO). Feature sharing among various habitats, i.e., exploitation, is made to occur due to migration operator whereas exploration of new SIV values, similar to that of GAs, is accomplished with mutation operator. In this paper, various migration variants of BBO algorithm, reported till date, are investigated to optimize the lengths and spacings for Yagi-Uda antenna elements for maximum gain. The results obtained with these migration variants are compared and the best results are presented in the ending sections of the paper.


Index Terms

Computer Science  Circuit And Systems

Keywords

Yagi-Uda Antenna  Bio-geography Based Optimization (BBO)  Migration Variants  Enhanced BBO  Immigration Refusal BBO  Blended BBO